

WHAT IS CLAIMED IS:

1. A communications method, which uses a data packet composed of a plurality of blocks so as to communicate, comprising the steps of:

transmitting an error correction state of each block from a receiving end to a transmitting end; and

retransmitting a block that is not error-corrected by the receiving end.

2. The communications method as set forth in Claim 1, wherein each block in the data packet includes an error correction code.

3. The communications method as set forth in Claim 2, wherein said error correction state of each block includes identification information of a block that is most lately outputted from said transmitting end, among blocks received by said receiving end.

4. The communications method as set forth in Claim 3, wherein said error correction state of each block further includes information that indicates how many blocks the receiving end has finished error-correction decoding.

communications method as set forth in claim 1, wherein the data is transmitted by using time data.

communications method as set forth in claim 1, wherein the data is transmitted by using image data.

communications apparatus, which is composed of a plurality of blocks, and which transmits an error correction code for each block from a receiving end so that retransmission is not necessary.

communications apparatus and method wherein each block in the data is encoded with an error correction code.

communications apparatus and method wherein each block in the data which receives the data packet is checked for an error, and if a decodable block is selected out of the blocks which have been received, so that a retransmission of the undecodable block is not necessary.

communications method as set forth in claim 1, wherein the data transmitted by using the image data.

communications apparatus, which is composed of a plurality of blocks, and which transmits an error correction code for each block from a receiving end so that retransmission is not necessary.

communications apparatus wherein each block in the data is encoded with an error correction code.

communications apparatus which receives the data packet and in which a block is selected out of the received blocks which has not been received, so that a retransmission of the undecodable block is transmitted.

communications apparatus, which is composed of a plurality of blocks, and which transmits an error correction code for each block from a receiving end so that retransmission of the communications apparatus and wherein each block in the data contains an error correction code.

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10. The communications apparatus as set forth in Claim 9, wherein the retransmission request is composed of a data packet that includes an error detection code and/or an error correction code.

11. The communications apparatus as set forth in Claim 10, wherein the retransmission request is composed of the data packet which further includes information that indicates how many blocks are required to be retransmitted.

12. The communications apparatus as set forth in Claim 9, wherein the retransmission request includes in one packet a plurality of pieces of information that indicate how many blocks are required to be retransmitted.

13. The communications apparatus as set forth in Claim 9, the retransmission request includes identification information of a block having a latest output time to be outputted from said transmitting end, among the blocks received by said receiving end.

14. The communications apparatus as set forth in Claim 13, wherein the retransmission request further

includes information that indicates how many blocks the receiving end has finished error-correction decoding.

15. The communications apparatus as set forth in Claim 9, comprising

error-correction decoding means for error-correction decoding per block with respect to the data packet that has been received;

selecting means for selecting an uncorrectable block in accordance with a result of the error-correction decoding; and

transmitting means for transmitting a retransmission request of the undecodable block.

16. The communications apparatus as set forth in Claim 9, comprising:

transmitting means for transmitting the retransmission request, in case no data packet is received for a predetermined period where the data packet is transmitted periodically.

17. The communications apparatus as set forth in Claim 7, which transmits the data packet in such a manner that, in case said communications apparatus receives a retransmission request of a block that is

undecodable for the receiving end, a following data packet that is to be transmitted next or later includes the block requested by the retransmission request.

18. The communications apparatus as set forth in Claim 17, wherein the block, which has been requested by the retransmission request, is added at a head of the following data packet.

19. The communications apparatus as set forth in Claim 17, wherein the block, which has been requested by the retransmission request, is added between a head and a tail of the following data packet.

20. The communications apparatus as set forth in Claim 17, wherein the block, which has been requested by the retransmission request, is added at a tail of the following data packet.

21. The communications apparatus as set forth in Claim 17, comprising:

error-correction encoding means for performing error-correction encoding of data to be transmitted;

generating means for generating the data packet in accordance with the retransmission request; and

transmitting means for transmitting the data packet.

22. The communications apparatus as set forth in Claim 17, comprising:

retransmitting means for retransmitting all blocks contained in a data packet that has been transmitted just before, if no retransmission request is received, where it is set that said receiving end returns, upon receipt of the data packet, a signal to said transmitting end so as to inform that the data packet is received.

23. The communications apparatus as set forth in Claim 17, comprising:

transmitting means for transmitting a following data block to be transmitted next when no retransmission request is received in a predetermined period, in case it is not set that said receiving end returns, upon receipt of the data packet, a signal to said transmitting end so as to inform the data packet is received.

24. The communications apparatus as set forth in Claim 17, comprising:

generating means for generating the data packet in such a manner that transmission sequence information and/or retransmission information is included in each block of the data packet.

25. The communications apparatus as set forth in Claim 17, comprising:

generating means for generating the data packet in such a manner that the transmission sequence information and/or retransmission information of each block in the data packet includes an error detection code and/or a correction code.

26. The communications apparatus as set forth in Claim 7, wherein the data packet has a fixed number of the blocks.

27. The communications apparatus as set forth in Claim 7, wherein the data packet has a variable number of the blocks.

28. The communications apparatus as set forth in Claim 7, comprising:

transmitting and receiving means for transmitting and receiving by using a radio wave.

29. A communications system, comprising:
the communications apparatus as set forth in Claim
9; and
the communications apparatus as set forth in Claim
17.

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